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REMARKS

Claims 1, 3-8, 12, 14-17,19-22 and 24-46 are pending. The office action rejects
independent claims 1, 15, 17, 21, 35, 41, and 43 as unpatentable over Ruszczyk (US Pat.
5,886,993) in view of Joshi (US pat. 6,006,017), and rejects independent claim 39 as
unpatentable over Ruszczyk in view of Nassehi (US Pat. 5,185,737). The office action also
rejects each of the dependent claims as unpatentable over one or more of these references and
Lyles (US Pat. 5,917,822), Schoch (US Pat. 5,973,609), and Way (US Pat. 5,768,280).

Claim 1 requires "assigning communication resources in accordance with quality of
service requirements of a plurality of communication sessions, including determining a polling
pattern." The office action associates the limitation of determining the polling pattern with the
"formation of targeted poll messages and timing of these messages" in Ruszczyk. The office
action recognizes that "Ruszczyk fails to expressly disclose adapting assignment of the
communications resources and adapting the polling pattern."

Ruszczyk discloses a communication approach in which users make reservations with a
headend unit. The headend unit polls those users with "targeted polls" who have made
reservations to transmit allowing those users to transmit data in contention-free data slots.
(Ruszczyk, col. 10, lines 10-14). The hendend unit also polls groups of users to allow those
users to make reservations using "entry poll messages". An entry poll message identifies during
which "mini-slots" various groups of the users are permitted content for access to the
communication channel, possibly colliding with other users in the same group.

Ruszczyk may describe an "adaptive reservation manager" (911), but the only adaptivity
of that component that is describe or suggested relates to the entry poll messages in response to
reservation requests and collisions of reservation requests sent from the users in response to the
entry poll messages. (Ruszczyk, col. 11, lines 31-40). A headend scheduler (914) is provided
with QoS requirements of each connection that is admitted to the network and determines the
timing of control messages that include the targeted poll message. There is nothing to suggest
that once connections are admitted that the timing or content of the targeted poll messages
should depend in any way on monitoring of data transmitted on such connections.

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The office action relies on a second reference, Joshi, to provide the elements missing from Ruszczyk stating "Joshi discloses that the proportion or percentage of channels allocated for specific polling may be varied dynamically in response to the potentially changing transmission requirements of the network." Joshi describes a polling approach in which stations are either active or inactive. A primary station specifically polls active stations. If an active station does not respond with data or a negative acknowledgement, then that station is put in the inactive state. Inactive stations are not specifically polled. Joshi also describes a mechanism for an inactive station to become active.

As amended, claim 1 requires "polling each of the communication stations to transmit data." In Joshi, stations are either polled or not polled, depending on whether they are in an active or inactive state. Reacting to non-responsiveness of a station by not polling that station does not meet the requirement of the claim of "polling each of the communication stations," "for each of the communication sessions adapting a rate of polling associated with said session," and "continuing polling of each of the communication sessions according to the adapted polling pattern." Therefore even if combined, Ruszczyk and Joshi do not disclose or suggest all the limitations of claim 1.

Furthermore, the office action states that one of ordinary skill in the art would have been motivated to introduce Joshi's approach into Ruszczyk's system "in order to provide more efficient allocation of resources." However, there is nothing in Ruszczyk that suggests a need to modify the polling approach to avoid polling inactive stations. Indeed Ruszczyk does not disclose or suggest that inactive stations pose any problem that needs to be addressed.

Independent claims 15, 17 and 21, as respectively amended, are allowable for at least the reasons set forth above for claim 1.

Claim 35 requires that stations share access to a communication network according to a multiple-access media access control protocol. Even if combined Ruszczyk and Joshi do not disclose or suggest that the recited polling approach be used with a multiple access control protocol. The claim requires "transmitting data onto the communication network using the

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multiple access media access control protocol." The references on the other hand only use a polling media access control approach.

Claim 41 requires that the polling pattern is adapted according to communication requirements of the devices. Even if combined, the cited references disclose determining whether or not to poll a device according to whether or not to specifically poll a device according to whether or not it is responsive and do not teach adapting the polling pattern according to a communication requirement of a device. Furthermore, as amended, the claim requires that the polling pattern is adapted by changing rates of polling associated with the devices. The cited references do not disclose or suggest this limitation.

Claim 43 as amended also requires that the polling pattern is adapted by changing rates of polling associated with the devices, and therefore is allowable for at least the reasons set forth for claim 41.

Claims 39-40 are cancelled.

New dependent claim 47, which depends on claim 1, has been added.

The dependent claims are allowable for at least the reasons set forth above for the respective independent claims upon which the depend.

Claim 20 has been amended correct a typographic error in the dependency, thereby addressing the rejection under 35 USC 112.

Regarding the objection to claim 36, the "accepted messages" are accepted "over said software interface" and are transmitted "onto the communication network." These messages are distinct from the polling messages transmitted from the arbiter station. The applicant has amended the claim to clarify the meaning of "accepted messages" without changing the scope of the claim.

The office action states that the Information Disclosure Statement filed on July 10, 2000, fails to comply with 37 CFR 1.98(a)(2) for failing to provide copies of the cited references. This application is a continuation in part (and claims the benefit of priority under 35 USC 120) of U.S. application serial no. 08/907,812, filed August 14, 1997. Under 37 CFR 1.98(d) copies of the cited references are not required as they were provided in the parent application.
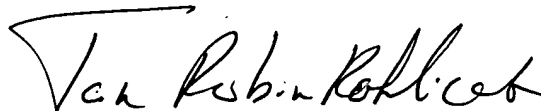
Enclosed is a $950.00 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: 2/27/04

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